

Name: _____
 Date: _____
 Class: _____

Algebra
 Unit 12
 PS

****Remember, this assignment is 15 points of your 100 point test grade. You can have this assignment checked as many times as you wish prior to the test. It is due at the beginning of class the day you take the test****

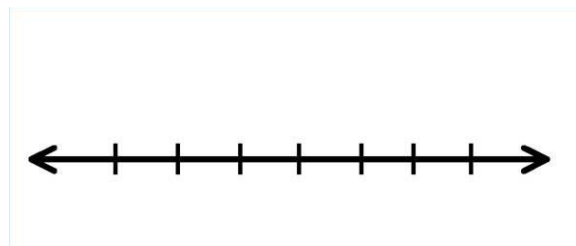
1) [3] Construct a stem and leaf diagram for the following data, which represents the number of times a family has eaten pizza in the last year.
 50, 42, 12, 77, 30, 35, 40, 17, 4, 18, 22, 102, 55, 58, 30, 31, 41, 48, 58, 50, 101, 8, 59, 10

2) [4] Using the following stem and leaf diagram, find the mean and the median.

Number of dollar spent on cable/satellite

Stem	Leaf
8.	0 0
9.	0
10.	0 0
11.	0 0 5
12.	0 0 0 2
13.	2 5 8 8
14.	0 0 0 0 4 6 8
15.	0 0 5
16.	0 2 6 8
17.	0 0 5
18.	0 2 5
19.	0 5
20.	0 5

3) [3] Using the data from #3, create a box plot below:



4) [2] Using the data from the following table, find the median

Grade	Number of Students
52	15
68	22
74	45
81	27
88	19
91	6
100	4

5) [2] Using the data from the table in #4, find the mean

6) [3] Using the data from the table in #4, find the inner quartile range

7) [4] The chart below shows the average speed a driver is driving and the fuel efficiency they get. Draw a scatter plot for this data and explain what you would expect the correlation coefficient to be. Does it appear that a linear equation could be used to model this information (explain)?

Average Speed	29	31	60	52	47	65	75	44	50
Fuel Efficiency	26	22	17	18	19	15	14	20	21

8) [4] Using the calculator, find the linear regression equation that could be used to model this data in #7 and the correlation coefficient as well (all rounded to the nearest hundredth).

9) [2] Using your equation from #8, predict what you could expect your fuel efficiency to be if you average speed was 60 miles per hour.

10) [2] The table below shows the peak wind speed during a day, and the total damage to roofs in the city of Swanson. Would you think this could be considered a causal relationship? Why or why not?

Max Speed	10	50	75	25	35	88
Total Damage Cost	500	2000	5000	550	750	10500

11) [4] Using the data from #10, create a scatter plot. Create a linear regression equation for this (rounding the numbers to the nearest tenth). Sketch the line of best fit onto the graph using this equation. Do you think this is a good model to use?

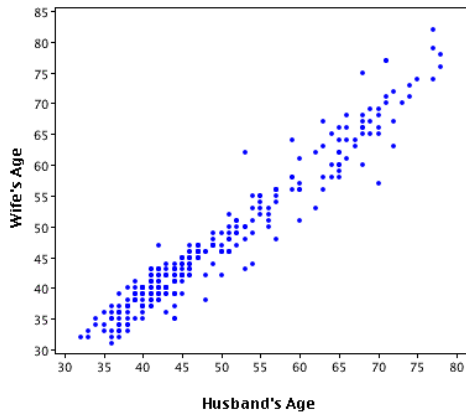
12) [3] Using the data from #10 (and your info from #11, create a residual plot for this data. What does this residual plot tell you about this data?

13) [3] Using the data below, which compares the number of people in the household to the number of electronic devices in the household, find the equation of the line of best fit (to the nearest hundredth) and also find the residual value for

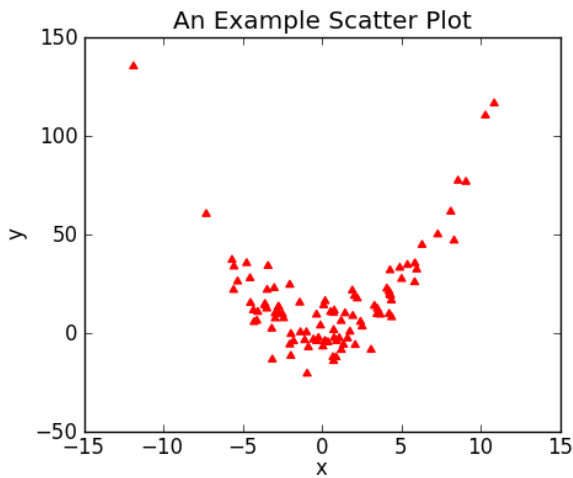
Number of People	5	3	2	7	4	4	1	3	8
Number of Devices	13	6	5	10	8	11	3	10	12

14) [2] What is the correlation coefficient for the data in #13? What type of relationship does this indicate?

15) [2] What type of relationship does the following data have?



16) [2] What type of relationship does the following data have?



17) [2] What type of relationship does the following data have?

